

REMARKS

In the outstanding Office Action, the Examiner objected to the title; rejected claim 6 under 35 U.S.C. § 103(a) as being unpatentable over Applicants' Admitted Prior Art ("AAPA") in view of Japanese Patent Laid-Open (Kokai) No. 1199467 to Miyagawa ("Miyagawa"); and rejected claim 19 under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 5,736,774 to Fujihira ("Fujihira").

By this amendment, Applicants have amended the title, and amended claim 6. Applicants additionally have added new claim 21, supported in the specification at, e.g., page 20, lines 15-23. Claims 6, 19, and 21 are currently pending in this application.

I. Objection to the specification

Regarding the Examiner's objection to the title of the invention, Applicants have amended the title to read LATERAL HIGH-BREAKDOWN-VOLTAGE TRANSISTOR HAVING DRAIN CONTACT REGION. Applicants respectfully submit that the title is now clearly indicative of the invention to which the claims are directed. Accordingly, Applicants respectfully request that the Examiner withdraw the objection.

II. Rejections under 35 U.S.C. § 103(a)

Regarding the Examiner's rejection of claims 6, and 19 under 35 U.S.C. § 103(a), Applicants respectfully disagree with the Examiner's assertions and conclusions as set forth in the outstanding Office Action¹. Accordingly, Applicants respectfully traverse these rejections on the basis that the Examiner has failed to establish a *prima facie* case of obviousness.

To establish a *prima facie* case of obviousness under 35 U.S.C. §103(a), each of three requirements must be met. First, the reference or references, taken alone or combined, must teach or suggest each and every element recited in the claims. See M.P.E.P. §2143.03 (8th ed., 2001). Second, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to combine the references in a manner resulting in the claimed invention. Third, a reasonable expectation of success must exist. Moreover, each of the three requirements must “be found in the prior art, and not be based on applicant’s disclosure.” See M.P.E.P. § 2143 (8th ed., 2001). At a minimum, the Examiner cannot establish that the references teach or suggest each and every element of claims 6 and 19.

A. Claim 6

Claim 6, as amended, recites a combination including, for example, “wherein the drain contact region has a first distance from the first contact surface to an edge of the drain contact region facing the source region, the source region has a second distance from the second contact surface to an edge of the source region facing the drain region, **and** of the first and second distances, **only** the first distance is 5 μm or more” (emphasis added). AAPA fails to teach or suggest at least this element.

At page 3 of the Office Action, the Examiner concedes that AAPA fails to teach “a distance from a contact surface of the drain region to an edge of the source region side of the drain contact region being 5 μm or more.” Accordingly, AAPA fails to teach a

1 The Office Action contains a number of statements reflecting characterizations of the related art and the claims. Regardless of whether any such statement is identified herein, Applicant declines to automatically subscribe to any statement of characterization in the Office Action.

combination including at least the element “wherein the drain contact region has a first distance from the first contact surface to an edge of the drain contact region facing the source region, the source region has a second distance from the second contact surface to an edge of the source region facing the drain region, **and** of the first and second distances, **only** the first distance is 5 μm or more,” as recited in claim 6 (emphasis added).

Miyagawa fails to cure the above-noted deficiencies of AAPA. At page 3 of the Office Action, the Examiner characterizes Miyagawa as teaching “a distance (L1), which is the distance from the edge of the drain region (12) facing the source region (11) and the contact hole (14), that is not less than 3 μm .” Miyagawa, however, teaches:

the shortest distance L1 between the edge of the drain region 12 facing the source region 11 and the contact hole 14 provided in the drain region 12 and the shortest distance L2 between the edge of the source region 11 facing the drain region 12 and the contact hole 13 provided in the source region 11 are **both** set at a value not less than 3 μms .

Miyagawa, abstract (emphasis added). Miyagawa thus teaches that **both** distance L1 in drain region 12 **and** distance L2 in source region 11 are 3 μm or more. Accordingly, Miyagawa fails to teach the combination including at least the element, “wherein the drain contact region has a first distance from the first contact surface to an edge of the drain contact region facing the source region, the source region has a second distance from the second contact surface to an edge of the source region facing the drain region, **and** of the first and second distances, **only** the first distance is 5 μm or more,” as recited in claim 6 (emphasis added).

Since the combination of references fails to teach or suggest every element of claim 6, the Examiner has failed to make a *prima facie* case of obviousness. Accordingly, Applicants respectfully request that the rejection of claim 6 under 35 U.S.C. § 103(a) be withdrawn.

B. Claim 19

Claim 19 depends from claim 6, and accordingly requires all of the elements of claim 6, including at least the element, “wherein the drain contact region has a first distance from the first contact surface to an edge of the drain contact region facing the source region, the source region has a second distance from the second contact surface to an edge of the source region facing the drain region, **and** of the first and second distances, **only** the first distance is 5 μm or more” (emphasis added). As discussed above, neither AAPA, nor Miyagawa, teach or suggest at least this element.

Fujihira, apparently cited by the Examiner at page 4 of the Office Action for allegedly teaching “a diode formed by short-circuiting the source wiring and the gate electrode,” fails to cure the above-noted deficiencies of AAPA and Miyagawa. Fujihira teaches a “high voltage n-channel transistor” wherein “a distance between the signal wiring and one end of the second high voltage junction terminating structure on the side of the low potential side low voltage circuit portion are both in a range of 100 μm to 5 mm.” Fujihira, col. 6, lines 9-18. Fujihira, however, fails to teach or suggest at least the element, “wherein the drain contact region has a first distance from the first contact surface to an edge of the drain contact region facing the source region, the source region has a second distance from the second contact surface to an edge of the source region facing the drain region, **and** of the first and second distances, **only** the first

distance is 5 μm or more," as recited in claim 6, and required by claim 19 (emphasis added).

Since the references, whether taken alone or in combination, fail to teach or suggest every element required by claim 19, the Examiner has failed to establish a *prima facie* case of obviousness. Accordingly, Applicants respectfully request that the rejection of claim 19 under 35 U.S.C. § 103(a) be withdrawn.

C. Claim 21

Claim 21 depends from claim 6, and accordingly requires all of the elements of claim 6, including at least the element, "wherein the drain contact region has a first distance from the first contact surface to an edge of the drain contact region facing the source region, the source region has a second distance from the second contact surface to an edge of the source region facing the drain region, *and* of the first and second distances, *only* the first distance is 5 μm or more" (emphasis added). As discussed above, neither AAPA, nor Miyagawa, nor Fujihira, teach or suggest at least this element.

Moreover, new claim 21 of the present application, recites a combination including at least "the substrate contact region extends from inside the second contact surface to outside the second contact surface along a surface of the semiconductor layer" (see FIG. 1B). Applicants respectfully submit that the applied references fail to teach at least this element as well. Accordingly, Applicants respectfully submit that new claim 21 is therefore allowable over the prior art of record.

In view of the foregoing amendments and remarks, Applicants respectfully request reconsideration and reexamination of this application and the timely allowance of the pending claims.

Please grant any extensions of time required to enter this paper and charge any additional required fees to our deposit account 06-0916.

Respectfully submitted,

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